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ABSTRACT

Vocational education programs adapted for use in rural areas are often unsuccessful because they do not meet the unique needs of rural communities. Rural school districts have limited financial resources, and few rural schools can offer a wide range of programs or special services to students. Smaller rural communities need persons having multiple skills, including those necessary for entrepreneurship and jobs in small business. Whatever form it takes, vocational education can only meet the needs of the rural population if it provides training that would equip individuals to remain in their community and contribute to its economic development. During the first half of the 20th century, rural vocational education was dominated by courses in vocational agriculture and home economics. Later, rural school systems responded by building regional vocational education centers to deliver new types of training. Today's rural schools must overcome such problems as lack of cooperation and sharing among districts, diminishing resources, and changing technology and market demands. A potential solution to the problem of the declining economic base of rural communities is more collaborative activities. Rural vocational education must be able to develop programs responsive to the needs of the types of industries in their immediate areas. (MN)

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Information Series No. 328

# THE ROLE OF VOCATIONAL EDUCATION IN RURAL AMERICA

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## FOREWORD

Vocational education programs adapted for use in rural areas often are unsuccessful because they do not meet the unique needs of rural communities. Many critical issues in rural education have been identified and these issues are capturing national attention. This paper examines the status of vocational education in rural America and focuses on models that are effective in addressing these issues.

The profession is indebted to Duane G. Jansen for his scholarship in preparing this paper. Dr. Jansen serves as Director of the School of Occupational and Educational Studies, Colorado State University. Dr. Jansen wishes to thank Joseph T. Newlin, Executive Director, National Rural Education Association, for his help in locating information. The author also acknowledges the assistance of Mary Lou Cornette, Jackie L. Friederick, Arlis E. Jansen, and David C. Montanari in paper preparation.

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## EXECUTIVE SUMMARY

The history of American education has focused primarily on the events and conditions that occurred in urban settings. Only recently have researchers begun to focus on such issues as education for economic development, problems with achieving educational equity in rural America, issues relating to school size, the role of the school in community life, and problems in retaining staff in rural schools. This paper examines the status of vocational education in rural America and reviews the problems and solutions regarding the role of vocational education in rural America.

First is a synopsis of federal, state, and local policies affecting vocational education opportunities in rural America. Next is a description of an historic model for delivering vocational education in rural areas and contemporary patterns for these delivery systems. Finally, the author discusses implications for basic education, economic development, and modifying vocational curricula in rural education programs.

In 1980, over 59 million Americans throughout the country could be counted living in rural, nonurban areas. After seven decades of in-migration to metropolitan centers, people are moving back into the rural areas. Nearly all of the growth in rural population was due to growth in nonfarm population. These changes in the make-up of the rural population, employment, and life-style are important when determining education and rural development strategies to be considered for the 1980s and beyond.

In the past, "rural" had been viewed as synonymous with "farm." Today less than 3 percent of the rural population live and earn a wage on ranches or farms. However, low population density and small, closely knit communities that have always typified rural America remain active and vital. But rural development is inhibited by limited support services, limited levels of available professional expertise, and limited role models and exposures for young people.

Rural school districts have limited financial resources and, with a tax base that is stagnant or eroding, few rural schools can offer a wide range of programs or have special services available for students. Opinions vary as to what role education should play in the economic growth of rural areas. In a smaller rural community there is a need for persons having multiple skills, including skills necessary for entrepreneurship and jobs in small business. Whatever form it takes, vocational education can meet the needs of the rural population only if it provides training that would equip individuals to remain in their community and contribute to its economic development.

Government legislation concerning rural education has focused on such concerns as the funding of specific vocational programs, availability of high-quality vocational programs in rural areas, Job Corps, cooperative vocational education programs, and the introduction of new programs, particularly in economically depressed areas.

During the first half of the 20th century, rural vocational education was dominated by courses in vocational agriculture and home economics. As mechanization reduced job opportunities on the farms, rural school systems responded by building regional vocational education centers to deliver new types of training.

In order for today's rural schools to provide effective vocational education for initial and subsequential employment, they must overcome such problems as cooperation and sharing among districts, conserving resources, changing technology, addressing market demands, and expanding employer inputs. Also, attention must be given to the lack of adequate guidance and counseling services that leaves rural youth exposed to only the limited variety of jobs and opportunities that exist in the rural environment. Centralized and decentralized organizational structures and mobile facilities centers are methods used by various districts to solve these problems.

The declining economic base of many rural communities continues to jeopardize the ability of the schools to provide sound basic education programs. As a potential solution to this problem, vocational education must engage in collaborative activities to strengthen basic education through the various vocational education programs and then turn its attention to high dropout rates and lower academic achievement.

The role of vocational education in economic development in rural areas requires a curriculum that is flexible and responsive to the needs of business and industry. Up-to-date training is the key to meeting these needs. Rural vocational education must be able to develop programs that are responsive to the needs of the types of industries in their immediate areas.

Based on the conclusions and implications derived from the literature, the following recommendations for future rural vocational education action are made:

- National policymakers should provide set-aside funds for rural vocational and adult education.
- The U.S. Department of Education should sponsor research to determine rural vocational education needs and provide technical assistance for vocational program development in rural areas.
- The Congress should establish an office of rural education and development.
- State and local policymakers must recognize the value of vocational education as a contributor to the economic development and stability of rural communities.
- State funding policies should be modified to recognize the added cost of delivering vocational programs in rural areas.
- Rural school districts must organize to provide increased vocational program offerings cooperatively to students in rural areas.
- State policymakers should provide funds to encourage the development and use of innovative instructional delivery systems for rural areas.

# INTRODUCTION

The role of vocational education in rural America is changing as the face of rural America changes. The emerging definition of the rural population and the diversity of the rural economic base have forced educational planners to deal with these changes. The educational needs of rural communities are unique, and in order to be successful, vocational education programs must address and meet these needs.

The history of American education has been focused primarily on the events and conditions that occurred in urban settings. DeYoung (1987) described the school reforms of the 1950s through the 80s as having been targeted primarily at the problems in inner cities, national defense needs, and occupational skills needed to compete internationally. These reforms have continued the bias toward much of the educational policy, scholarship and research being based upon urban issues and concerns. In recent years an interesting and diverse body of literature on issues and problems in rural America has begun to emerge. Rural education researchers have begun to focus on such issues as the role education can play in economic development in rural communities, problems with achieving educational equity, school size, the role of the school in community life, and problems in retaining qualified staff in rural schools.

The problem of providing adequate education in sparsely populated areas is becoming increasingly difficult at all levels and especially difficult in vocational education. The purpose of this monograph is to examine the status of vocational education in rural America, to review the wide range of problems and solutions regarding the role of vocational education in rural America, to draw some implications from the literature, and to pose several recommendations for future action.

## THE IMAGE OF RURAL AMERICA

A 1980 report from the United States Department of Education revealed the rural population of this country to be sizable. Over 59 million Americans throughout the country could be counted as living in rural, nonurban areas (Worthington 1983). As defined in the 1980 census, rural population includes "all persons living outside urbanized areas in the open country or in communities with less than 2500 inhabitants" (Bell 1983, p. 1). This definition also includes those persons living in areas of extended cities with a population density of less than 1000 inhabitants per square mile.

This definition of "rural" populations includes the many people who have moved to the country during the last decade. After losing much of the rural population to the cities during and after the industrialization of the 1900s, people are now moving back into the rural areas. During the last decade the United States experienced the largest growth in rural population in any decade in 100 years. From 1970 to 1980 the rural population of the United States increased from 53.6 million to 59.5 million, a phenomenal growth rate of 11.1 percent (Worthington 1983). The 1980 census showed that for the first time in over 150 years rural areas had outstripped urban areas in population growth (Rosenfeld 1981).

The phenomenal growth rate of many heretofore rural communities pushed these same communities past the magical 2,500 mark and resulted in their inclusion in the 1980 census as "urban" communities. Real growth, defined as growth in the total area of land considered urban and the accompanying growth in population, was often due to annexation of rural areas by incorporated settlements of 2,500 or more population. Nearly all of the growth in the rural population was due to growth in nonfarm population. Actually, the farm population declined in the 1970s (Worthington 1983).

Notwithstanding the census definition of rural population, there was still a lack of agreement concerning what constitutes a rural school district. The National School Board Association considers a district to be rural if it is located in a rural setting, or the student enrollment is 2500 or less, or it's an intermediate or county unit that serves primarily rural units, or it encounters problems related to areas with population density of fewer than 1000 (residents) per square mile. (as cited in DeYoung 1987, p. 137)

The National Rural Development Institute definition of a rural district specifies that it is one where the number of inhabitants is less than 150 per square mile or when located in counties with 60 percent of the population living in communities no larger than 5000 inhabitants. (as cited in DeYoung 1987, p. 137)

Whatever method is used to determine which school districts are rural, the changes in the makeup of the rural population, employment, and life-style are important when determining education and rural development strategies to be considered for the 1980s and beyond. Rosenfeld (1983a) stressed the need for rural communities to rethink their education policies and practices and look specifically at ways to address changes in the work patterns and daily routines that are evolving in rural America.

In the past, "rural" had been viewed as synonymous with "farm." This relationship between the two terms no longer exists. Statistics show that by 1920 only 30 percent of the nation's population was truly farm-based, that is, dependent upon the land for a living. Today this figure has shrunk to less than 3 percent of the population living and earning a wage on ranches or farms (McCannon 1985).

Also, an image problem associated with "rural" characteristics has resulted in an unfavorable view of rural America. Often the term "rural" conjures up a picture of a population suffering from lack of ability or lack of culture. Those who know rural America know this connotation to be untrue. Rural America is and will remain very heterogeneous (Worthington 1983).

Many see rural Americans as more independent in their life style and as leading a much simpler way of life than their urban cousins. This idealized version of the American rural scene is misleading. Although self-employment in agriculture or small business makes up a portion of the livelihood of the rural population, the majority are at least partially, if not totally, dependent upon additional sources of income, primarily from one or more members of the family working in non-agricultural jobs.

Contributing to the "image" problem of rural America is the fact that students in the 67 percent of the country's schools that are considered rural (33 percent of all students in the nation) show higher attrition rates as well as lower achievement levels than do urban students (Worthington 1983). Miller (1982) indicated that rural students tend to be consistently lower than urban students in the basic skills needed for nonfarm employment. Many factors may contribute to this problem, but one that seems obvious is that the population in some rural areas is growing whereas the tax base is not. Worthington (1983) saw rural development as inhibited by "limited support services, limited levels of available professional expertise and limited role models and exposures for young people" (p. 4). Many educators have felt that "rural education in America has been a stepchild" to other aims and interests (DeYoung 1987, p. 140).

On the plus side of the image, rural America is seen as enjoying a rich, deeply rooted cultural heritage and a true stability that is not obvious in urban centers (Worthington 1983). Low population density and small, closely knit communities that have always typified rural America remain active and vital. Amato saw rural America as still distinguished by a "direct economic dependence on resources of the land," as well as by a more immediate relationship between the natural and social environment (as cited in McCannon 1985). Blakely (1984) listed as one of the challenges for rural populations the preservation of their past as they meet the changes that face them.

## ECONOMIC AND EDUCATIONAL NEEDS OF RURAL AMERICA

The educational needs of rural America are closely tied to economic needs. This relationship has two major thrusts: economic and social change affects the delivery and financing of education, and economic and social change influences the nature and content of rural area education (Harl 1985).

Schools in rural areas have traditionally been at a disadvantage in financing their educational programs. School districts in rural areas tend to be smaller than metropolitan districts and have limited financial resources available. With a tax base that is stagnant or eroding, few rural schools can offer a wide range of programs or have special services available for students (Rosenfeld 1981).

The problems faced by small rural schools in maintaining effective vocational education programs were outlined in a Small School Vocational Cooperative research project report conducted under Public Law 94-482 in the state of Washington. Emerson and DeYoung (1982) concluded that small high school districts are experiencing "a diseconomy of scale when attempting to provide diverse and technologically current vocational education programs" (p. 4). The problems identified by Emerson and DeYoung typified the concerns experienced by other authors writing about small school districts. The major concerns are

- Lack of vocational program diversity in small school districts
- Problems in attracting and retaining vocational staff
- Lack of quality equipment
- Lack of certified vocational staff
- Lack of vocational expertise
- Lack of state department assistance
- Lack of student access to vocational programs comparable to those available in urban areas
- Issue of quality and relevance of existing programs in relation to industry needs
- Issue of local control versus state control. (Emerson and DeYoung, pp. 2-3)

Long (1982) points out that there are many problems associated with the delivery of general education services to rural areas and that these same problems increase with the delivery of quality vocational education programs. Vocational education is expensive because it requires costly facilities, equipment, and materials. These costs, added to the cost of transporting and housing students from sparsely populated regions, often make vocational education programs prohibitive (Couey 1976; Fratoe 1979; Rosenfeld 1979; as cited in Long 1982).

## Economic Needs

Long (1982) sees rural values that stress self-reliance and funding formulas based on assessed valuation of local property as complications in providing adequate vocational education to rural communities. For example, rural communities found it difficult to raise the matching funds demanded by the Vocational Education Act of 1963.

The dilemma facing rural educators was outlined in *The Unfinished Agenda: The Role of Vocational Education in the High School.* The American public expects a great deal of its schools: to teach basic skills, to transmit cultural heritages, to prepare people for work, to develop health habits, to instill proper attitudes, to instill citizenship, to train drivers, to develop consumer skills, to prepare people for family living, to develop various social attitudes, and to win athletic events. (as cited in Rawlinson and Stadt 1987, p. 28)

In light of all these expectations, small rural schools are hard pressed to provide adequate resources for vocational education because of the high cost of such programs.

According to Harl (1985) the financial crunch affecting many rural school districts will worsen. The economic trauma being faced by agriculture is likely to result first in interruptions in the flow of property tax revenues. The plight of farmers facing insolvency can spread to suppliers and other merchants whose businesses depend on agriculture. The ensuing drop in value of farmland as well as business property will affect the capacity of rural areas to support public services including education.

The problems described are not universal—economic changes seem to be bringing rural areas some growth in population and economic activity. However, growth and change are not uniform across the nation. Many places are left with the same problems and poverty. According to Smith (1980), "economic growth and change may not be the right kind—and they may come too fast as well as too slowly" (p. 10). These forces may only cause an area to gain a new set of problems instead of solving old ones.

The forces of national and international changes have caused rural communities to become more dependent on factors over which they have had very little control (Hobbs 1987). Recent economic changes have not occurred uniformly across rural America. Hobbs points out that rural economic development has been uneven with rural industrialization occurring mainly in the south and west, whereas the farm crisis of the 1980s has been predominantly a crisis of the upper midwest. Although many rural communities continue to be dependent upon agriculture, due to the growth of other sources of rural income, agriculture now ranks well down the list of rural income producers. Nachtigal (1980) warns that talk about rural America in general is not very productive because local circumstances vary too greatly. A strategy that makes sense for one rural area may not be appropriate in another.

Worthington (1983) states that "rural America continues to experience a disproportionate share of the educational and economic deprivation that exists in this country" (p. 3). During the decade prior to 1983, metropolitan areas saw an increase in the poverty rate from 10.7 to 11.9 percent, whereas in rural areas it rose from 13.4 to 15.4 percent.

Smith (1980) reveals that the economic growth in rural areas was largely in the trade and service industries, offering some highly paid professional occupations, but including many extremely low paid, low skill jobs. Occupations in hotel and restaurant work, health care, retail sales, and other service areas often provide inadequate incomes while underemploying people with few options.

Highly sophisticated technical industries sometimes drawn to rural areas often import their entire work forces because of the specialized skills required. Such "economic growth" provides few new jobs for local people. Industries such as mining often bring temporary high wages to a rural area, only to close when the "boom" is over (Smith 1980). The economic needs of rural areas then seem to center around growth that will provide jobs for local persons, at adequate wages, with a commitment to remain over the long term, and without sacrificing the traditional culture and ecology of the area (Smith 1980).

**Educational Needs**

Sher (as cited in McCauley 1982) reports that rural schools experience more dropouts than the national average and fewer rural students attend and graduate from college. Basically, these young people face only one prospect: they must go to work. The urgent need is for vocational programs to educate these rural youth for the inevitable job market. Most rural high school students have access to some type of vocational education experience. There are two common types of delivery systems. In large, consolidated, comprehensive rural high schools, vocational training is usually provided on site within the institutions. Vocational students in smaller schools commute to either a comprehensive high school or to a regional facility specifically designated for vocational education delivery.

McCauley (1982) notes that commuting does not solve the vocational education access problem for most students in rural areas where the distance to an area vocational center is so great that effective participation is not feasible. Spooner, Lynch, and Renner (as cited in McCauley 1982) all indicate that the maximum distance for effective vocational education delivery is a 30-mile radius for a vocational center. Sher (1983) observes that many rural students attend high schools in isolated areas where no programs in vocational training are offered and none are accessible through commuting. Many rural schools offer substandard vocational programs and facilities and tend to enroll high numbers of poor and minority students. These situations are compounded by the sheer time and energy needed to commute to distant schools that do offer adequate vocational programs.

Opinions vary as to what role education should play in the economic growth of rural areas. Blakely (1984) sees knowledge as the principal component of the new industrial form in rural areas. He feels that rural areas are "shedding the low skill, low wage, urban-discard industries and branch plants for new growth industries" (p. 10). In agreement with Smith (1980), he sees that growth in the service sector with 60 percent of all rural employees working in occupations similar to their urban counterparts. Better links between education and economic growth are among Blakely's recommendations. Since industry is increasingly searching out a quality labor force to determine a location, the contribution of 2- and 4-year colleges to economic development is important.

Hobbs (1987) contends that students, the future workers in the rural areas, must be more capable of innovation and "must be able to understand the problem—not some narrow slice of it embedded in a highly structured and organized production process" (p. 32). Hobbs believes that there is a growing need for generalists, in addition to new kinds of specialists. For example, in smaller rural communities there is a need for persons with multiple skills. He cites those who can become self-employed and entrepreneurs.

Similarly, Rosenfeld (1985) calls for a broadening of vocational training for rural areas and coined the term "renaissance technicians." He states:

> High school vocational education will have to stop thinking of itself primarily as a terminal program aimed at immediate employment and instead think about placing greater emphasis on preparation for additional technical education. . . . Unlike the Renaissance man of the Fifteenth and Sixteenth Centuries, who could acquire a wide range of skills and diverse knowledge because the world was simpler, the Renaissance Technician of today and tomorrow must acquire broader based skills and knowledge because the world is more complex and changing more quickly. To the Renaissance Man, diversity and adaptability were luxuries, to the Renaissance Technician they are necessities, critical to the successful modernization of the South's economy. (p. 2)

Rather than training for employment in new and emerging industries, Rosenfeld (1983a) suggests emphasizing entrepreneurship and skills necessary for self-employment and jobs in small business. He theorizes that "these small businesses, with their strong community ties and their vested interests in local development, will eventually fortify rural economies" (p. 271).

DeYoung (1987) cites several writers who contend that

> the future existence of rural communities will depend on autonomous economic development in which the local school will have to play a part. Rather than serving distant national needs, or hoping to attract outside businesses, local government and school officials should utilize the public school curriculum . . . for fostering local small-business development projects. (p. 140)

Harl (1985) sees a need for adult education for farmers, and for their spouses, who will be leaving farming for financial reasons. He also writes of a need for educational services for adults remaining in farming to help them achieve the high levels of management, marketing, and other skills needed to succeed in farming. A third area of educational need described by Harl is providing young people not wanting to stay on the farm with skills needed in the nonfarm world of work.

Whatever form it takes, vocational education can only meet the needs of the rural population if it provides training that would equip individuals to remain in their community and contribute to its economic development (Smith 1980). Harl concludes that

> those charged with managing and administering educational programs in rural areas are approaching a task of Herculean proportions: reconciling unprecedented demands for educational services on the one hand and carrying out programs in an environment of diminished local capacity to support established levels of educational services on the other. (p. 25)

## POLICIES AFFECTING VOCATIONAL EDUCATION OPPORTUNITIES

The first major policy in vocational education began with the enactment of the Smith-Hughes Act in 1917. Through this act the federal government became actively involved in the establishment and regulation of vocational education. This initial legislation funded vocational programs in vocational agriculture, home economics, and trade and industrial education, all of which had direct application for rural schools and rural students.

As the demographics of America changed through the years and new legislation was enacted, new vocational programs were introduced. These new vocational programs included distributive education, health occupations, business and office occupations, and technical education and placed an emphasis on urban-type occupations. Whereas education remains a state and local responsibility, to the degree that the federal government provides resources to help support vocational education, federal priorities can be imposed on state and local vocational education programs (Rosenfeld 1983b).

The Colorado State Council on Vocational Education (1987)states that the availability of high-quality vocational programs in rural areas must be addressed. The Vocational Education Act of 1963, the law which is considered the "bedrock" of federal legislation, says that

> persons of all ages in all communities of the state . . . will have ready access to vocational training or retraining which is of high quality, which is realistic in light of actual or anticipated opportunities for gainful employment. (p. 1)

However, this portion of the legislation was never fully implemented as many people in many areas of nearly every state do not have access to any vocational training.

Section 15 of the Vocational Education Act of 1963 authorizes funds for residential schools; however, funds were never appropriated and residential schools were never constructed. McCauley (1982) notes that funds were provided for a form of residential schools through the Equal Opportunity Act of 1964 that established the Job Corps. Seventy-three residential centers were provided for vocational training, general education, and useful work. Many of the Job Corps Centers were located in rural areas and served rural youth and young adults.

Section 122 of the Vocational Education Act of 1963 relates specifically with the development of Cooperative Vocational Education programs. Section 122 states, in part, that funds

> may be used for establishing or expanding cooperative vocational education programs through local educational agencies with the participation of public and private employers. Such programs shall include provisions that
>
> (a) funds will be used only for developing and operating cooperative vocational programs . . . which training opportunities may not be otherwise available. (McCauley 1982, p. 24)

This section of the act appears to have direct application to rural schools since specific job skill training programs are not "otherwise provided."

Section 132 of the Act also provides funds for exploratory and innovative programs. Many rural schools were able to take advantage of the provision of this portion of the legislation (McCauley 1982).

Long (1982) points out that the Vocational Education Act of 1963 makes no mention of rural or urban needs and thus assumes homogeneity of demographic characteristics. This lack of distinction results in inequities for rural communities and schools. Long points out that the Vocational Education Act of 1963 and its succeeding amendments, as well as many state policies, have numerous policy regulations that preclude access by many rural school districts to greatly needed federal and state funds. One example used to illustrate this point is the utilization of the number of persons receiving unemployment compensation in a specific district as a common determinant of need for funding vocational skill programs. The unemployment figures can be misleading for rural regions because of the high incidence of seasonal farm workers and other underemployed individuals. Thus, funding formulas often tend to cause rural districts to receive fewer funds than they may be entitled to receive. Rosenfeld (as cited in Long 1982) points out that traditional rural values often dissuade many of those eligible for unemployment payments from applying, therefore, further reducing the percentage figures. Long (1982) reports that in Gadsden County, Florida, unemployment compensation in 1 year was allotted to 9.2 percent of the work force in the county; however, when a survey was conducted to determine the real level of unemployment, the figure went as high as 26 percent.

Rosenfeld (as cited in Long 1982) concludes that state funding formulas that use the criterion that a school must have five or more vocational programs to be eligible for funding assistance eliminate a large number of rural schools that have legitimate needs for receiving funds. This is most apparent when the United States House Committee Report 94-1085 determined that 46 percent of rural students, for example, did not have access to schools that had five or more vocational programs. In Nebraska, in 1 year, this criterion resulted in 160 high schools, out of 210 schools that did offer some or minimal vocational classes, not receiving an allocation of vocational funds.

According to Rosenfeld (as cited in Long 1982) the funding criterion based on the assessed value of local property frequently works against rural districts. When the total assessed value is high, there is usually an assumption that there is less need. However, in some rural counties, large industrial farms or mining operations cause the assessments to be artificially high and not reflect the true wealth of the county.

State and local school districts were required in the Vocational Education Act of 1963 to provide matching funds for all excess costs. Rosenfeld (as cited in Long 1982) points out that since the excess costs of providing special vocational services to sparsely populated areas tend to be higher than in urban centers, it becomes more cost effective to direct the set-asides to urban districts that require a lower matching effort. Thus, this action tends to penalize rural districts because of their higher cost per student.

Sher (1979) provides the following recommendation for improving access for rural students:

> Immediate priority should be to conduct a detailed, programmatic and economic analysis of possible alternatives for delivering vocational education services to rural populations.

He continues to say that

> America's rural students deserve nothing less than our best effort to redress our nation's long history of responding inadequately to their needs for first-rate vocational education. (p. 275)

This recommendation called for states to begin to formulate policies to overcome some of the inequalities in opportunity that were being experienced in rural areas.

In comments to the staff of the Bureau of Occupational and Adult Education, Dunham expressed the following concerns:

> We must place a high priority on expanding and improving programs for youth in rural America. Drop-out rates in these locations often double or triple the state averages, and unemployment rates of 20 percent to 45 percent among these youth are commonplace. We ought to be building on the fact that the unemployment rate for youth who have completed vocational education is generally one-half that of those who do not. It is apparent that we ought to be with the kind of vocational programs which lead to employment. (as cited in McCauley 1982, p. 21)

The National Center for Research in Vocational Education (Mertens 1981-82), in cooperation with the United States Department of Education, Office of Vocational and Adult Education, conducted a study of the vocational and adult education systems in isolated rural areas. The study was designed to provide information that is necessary for the development of policy for vocational and adult education in rural areas. The results of the study revealed several problem areas: employment, funding, community attitudes, equipment and facilities, transportation, administration, accessibility, and legislation.

Later, Secretary of Education, T. H. Bell (1983) announced that the United States Department of Education had adopted a new policy regarding rural education: Rural education shall receive an equitable share of the information, services, assistance, and funds available from and through the Department of Education and its programs. In accordance with the new policy, Bell outlined several new initiatives for rural education:

- To assist educators and administrators in developing outreach and volunteer programs to improve the delivery of educational services to rural communities
- To expand the database on the condition of rural education
- To monitor closely program regulations, eligibility and evaluation criteria, directives and policies, to assure equity for all local educational associations, regardless of location, condition, or size
- To provide personnel to coordinate consolidation of available research on shortages and additional needs
- To give assistance in improving public/private sector collaboration at all levels
- To utilize the established delivery system through vocational home economics education to serve as a means of improving quality of rural family education

- To provide consultative and technical assistance to rural educational entities as a means to improve the quality of education in rural areas.

The Carl D. Perkins Vocational Education Act of 1984 included authorization to extend title II, part B funds for the expansion of vocational education activities necessary to meet students' needs and the introduction of new vocational education programs, particularly in economically depressed urban and rural areas of the state.

With both national and state interest being shown in increasing delivery of vocational education to rural areas, recommendations of those interested in expanding and improving vocational education should be examined more closely. Also, implications of the basic legislation involved in improving vocational education across the country particularly in the needy rural communities need to be considered.

## PATTERNS FOR DELIVERING VOCATIONAL EDUCATION

### Historic Model

Rosenfeld (1983) indicated that through the first half of the 20th century most rural communities provided secondary vocational programs that prepared youth for farms and farm-related occupations. Courses in vocational agriculture and home economics dominated the rural areas. Although every rural youth did not become a farmer or a homemaker, these narrowly focused offerings were considered appropriate and sufficient occupational education for most youth.

The early pattern for providing vocational education was influenced by the Smith-Hughes Act of 1917 and the George-Reed Act of 1929. The Smith-Hughes Act provided funding to promote and develop vocational education as it was related to agriculture, trade and industrial education, and home economics. The George-Reed Act increased the funding for agriculture and home economics and directly linked each state's funding allocation for agriculture to the ratio of its farm population to the total farm population of the United States. For home economics, the ratio used was the state's rural population to the total rural population of the United States (*Education for a Changing World of Work* 1964). Thus, the early model for vocational education was heavily influenced by the needs and population of rural America.

Rosenfeld (1983) noted that by the late 1950s agriculture had become so mechanized that farming could no longer provide enough jobs and thus, rural communities were forced to become more diversified. In the 1960s and 1970s nonmetropolitan industrialization began to spread to rural America and existing vocational programs no longer met the needs of the labor market. Aided by new federal legislation in 1963, rural school systems began to respond to the changing conditions by constructing regional vocational education centers to deliver new types of training programs intended to change the skills and behaviors of rural youths.

### Contemporary Patterns

The nature of the population and the problems related to the geographic settings in rural America make the delivery of vocational education more difficult today than ever before. Due to the small size of the student population in many rural high school districts, these districts cannot generate sufficient state and local funding to sustain diverse vocational education program offerings, or maintain the staff necessary to deliver the programs. In order for rural schools to provide effective vocational education for initial and subsequential employment, they must overcome many of the problems outlined in the literature such as cooperation and sharing among districts, conserving resources, changing technology, addressing market demands, and expanding employer inputs (Rawlinson and Stadt 1987).

A review of the literature on contemporary vocational education programs in rural America reveals that vocational offerings in rural areas are varied and often regarded as experimental (McCauley 1982). There appears to be little consistency among the various programs in different states and there are few examples of a statewide systems approach for any type of alternative

delivery system for secondary vocational education. There is some consistency, however, among programs within area vocational centers and community colleges.

Thomas and Peterson (1984) focused on various patterns of cooperation among school districts as a means of reducing the effects of declining enrollments and resources on individual school districts' ability to provide vocational education for their students. The two primary structures for providing inter-school district cooperation for delivering vocational education programs include centralized and decentralized centers. A centralized center is one in which facilities are located in one community or building and students are transported to that location or facility for vocational classes. A decentralized center is one that involves more than one facility in more than one community. Students, teachers, or both may be transported in the decentralized structure.

**Centralized Organizational Structure**

Peterson et al. (1986) describe a centralized center as

> an organizational entity with its own identity, structure, governance body, budget, staff, facilities, and programs located in one community. It is funded by its member school districts and by the vocational aids it receives from the state. Its policies, budgets, and procedures are developed by member district representatives and approved by member district boards. The vocational director is in charge of the center and functions as a school superintendent in the capacity of executive officer of the governing board and as a school principal with respect to supervision of the center teaching staff and programs. (p. 51)

The centralized center structure provides the opportunity for the development of strong vocational programs and for initiating needed changes in curriculum and other functions. The center's vocational director is responsible and accountable for program supervision, coordination, development, and accountability. While the central location makes administrative functioning more efficient, the communication with the individual school districts becomes more difficult.

The member school enrollments are used as a basis for assessing member school districts for center costs. The arrangement results in larger schools paying for the larger share of the center costs. One problem identified by Peterson et al. (1986) is that the larger districts may have fewer students enrolled proportionately in the centers than the smaller member districts because of the larger range of the curricular choices offered in the larger districts.

Centralized centers do increase the access of students in all member districts to quality vocational education programs. Access is limited only by the distance that students must travel and by scheduling conflicts that result from the time devoted to travel to and from the center. Scheduling that places center offerings in the middle of the day seems to be more disruptive to member school districts' schedules and results in districts that are closest to the center having the heaviest use of the center.

The centralized centers usually have larger and better equipped facilities than individual member districts could provide for their students and a greater diversity of programs can be offered due to the pooling of students with specific occupational interests into a single centralized program.

There are some problems associated with centralized centers that need to be considered. Peterson et al. (1986) cited vocational student organizations as likely to have problems in a center

because of student transportation to after-school or evening meetings and the lack of student identity with the center rather than with the home school district. Also, because the center may be located several miles from the member school districts, the lack of awareness of the center activities on the part of teachers, counselors, and members of the community may cause problems relating to community and student identity with the center. The lack of ownership feelings and questions relating to the cost effectiveness often plague centralized organizational structures and hinder their success as alternative delivery systems.

The main strength of centralized centers is their ability to deliver quality vocational programs to all students in a geographical area who may have otherwise been denied access to a diversity of programs.

McCauley (1982) reports that the philosophical approach to centralized centers appeared sound, but school rivalries were reported to be one of the major obstacles to the implementation of this approach in many of the most rural areas. McCauley also notes that the wide variation in the numbers of schools that participated in this approach in various states indicated that some philosophical differences may exist at the state leadership level.

**Decentralized Organizational Structure**

The decentralized organizational structure contains many of the same features as the centralized center. Peterson et al. (1985) describe a decentralized center as—

> an organizational entity with its own identity, structure, governance body and system, budget, staff, and programs. Its facilities are located in two or more communities and are likely to incorporate existing facilities of participating school districts. Power and control are in the hands of a center board and the boards of each participating district who approve the action of the center board regarding budget, policies, and operation of the center. The vocational director, as the executive officer of the board, implements board policies and manages the center operations. (p. 70)

In a decentralized center, the vocational director provides continuity and control over the quality of the educational services provided by the center. The individual school district's sense of ownership is usually stronger in a decentralized center, than in a centralized center, due in part to the location of center programs in more than one community. The stronger sense of ownership is likely to occur in communities in which the programs are located and less in communities without shared programs (Thomas and Peterson 1984).

The decentralized center, with its many members, will incur lower costs for each member similar to the costs in the centralized center. Selecting programs that do not duplicate existing programs in member districts increases the efficiency of the member districts and provides for greater diversity in the occupational offerings of the center.

The district students involved in the center's programs may lose more or less student time to travel than students involved in a centralized center depending upon the number of students enrolling in programs located in other districts. Decentralized centers are normally found in areas with moderately sparse student population and moderate travel distances between communities.

The decentralized center has a tendency to modify the positive and negative features of the centralized center. Although the leadership function is carried out in the same manner in both centers, it is more difficult to supervise programs and teachers in the decentralized because of the

multiple locations of programs and the distances between sites. On the positive side, the director is involved with each site and is more likely to visit member districts and build strong communication lines with district administrators. It is less likely that new facilities would need to be constructed in the decentralized center. The amount of space needed for specific programs in a decentralized center is usually less than in the larger centralized centers. In most cases, the existing facilities in member districts can be utilized thereby reducing the cost for constructing new facilities. The problems associated with the operation of student organizations is basically the same in the decentralized center as in the centralized center.

**Mobile Facilities Centers**

In the most sparsely populated rural areas, mobile facilities are utilized through a center agreement between several school districts. The mobile facilities center is different from other types of centers because the facilities are moved from one location to another. Peterson et al. (1985) conducted a case study of the mobile facilities center in the Northwest Multi-District in South Dakota and in their study a detailed description of the structure and functions of a mobile facilities center was developed. They describe the mobile facilities center as—

> being organizationally like other types of centers except for its use of mobile facilities. Facility mobility is of major importance because it provides access to educational programs in the student's own school district. The flexibility of mobile facilities in terms of location and convertibility to various uses is an advantage for school districts in a time of shifting demographics and curricular priorities. (p. 66)

The number of member school districts and the large distances between them makes supervision of the various laboratory programs a sizeable task. However, the ability to move the facility and teacher periodically overcomes the problem of transporting students over a great distance. The rotation cycle of programs among member schools is based upon the number of participating schools and available programs.

The flexibility in establishing a mobile facilities center provides for many advantages within the delivery system. Mobile units are generally less costly than permanent structures. The reduced cost of facilities and rotation of the programs enables participating schools to offer more vocational programs for their students. The disruption in the participating school's schedule is minimal because the facilities are located at the home school and no travel time is required.

McCauley (1982) states that the mobile laboratory was the alternative delivery system that was most frequently reported in the literature. The pattern for rotating the laboratories ranged from 2 weeks to 1 semester with 1 semester being the most common unit of time spent at each site. The teacher rotated with the mobile unit and the teacher turnover rate was alarmingly high. Despite any problems related to the mobile units, the literature revealed that the mobile unit delivery system was cost effective and adequately suited for sparsely populated areas.

**Supportive Services**

According to Couey and Fratow, career education and guidance services have been provided inordinately to urban centers leaving rural students without adequate counseling and career guidance services (as cited in McCauley 1982) to prepare rural students for nonfarm and nonhome careers. The lack of adequate guidance and counseling services leaves rural youth exposed to only the limited variety of jobs and opportunities that exist in the rural environment. Rural youth

need to obtain full knowledge of the local, regional, and national employment opportunities that exist and the level of skills needed to qualify for such employment. Larson (1982) states that "in rural Iowa, the number of role models to study or emulate in making career choices is limited" (p. 14). There are few opportunities to observe corporate attorneys, full-time professional firemen, and fashion merchandisers in rural America.

**Telecommunications and Other Technology**

One frequently cited problem in the literature is the difficulty in keeping teachers and students in rural locations up to date on changes in subject areas. The National Association of State Councils on Vocational Education (undated) recommends that "major emphasis be placed on the use and development of nontraditional methods (laser disk, video tapes, microwave television, etc.) to deliver vocational education" (p. 1).

In an attempt to provide the best possible educational environment for students, schools in sparsely populated areas may find that the utilization of telecommunications and computer technology can help to overcome many instructional deficiencies identified with rural schools. The electronic tools that have implications for improving the delivery of rural vocational education include telecommunications, computer-managed instruction, computer-assisted instruction, interactive video, noninteractive videotex and interactive videodisc (Hofmeister 1984).

Another example is the newer information-age technologies. They are particularly well-suited for providing online assistance to rural teachers and students. Through distance learning and electronic mail, rural vocational teachers can receive inservice training and information previously unavailable to them.

The use of mobile vans and labs in conjunction with electronic media enables small groups of students to receive vocational instruction that would normally be unavailable to them in remote areas. In sparsely populated areas, buses used to transport students to and from attendance centers can be equipped with microcomputers and interactive video programs that enable students to utilize their time more efficiently.

## IMPLICATIONS

Much of the literature on the history of American education has focused primarily on education in an urban setting. Only in the last 15-20 years has the topic of rural education received the attention of educational researchers. Most of the scholars who write about rural and small schools hold some similar perspectives on the field. They all tend to agree that rural education has been a stepchild to other aims and interests of professional educators (DeYoung 1987). They also agree that solutions to educational problems in metropolitan America may or may not have utility for rural education. Researchers argue that if rural schools are ever to achieve their full potential, the demographic, economic, administrative, vocational, and community differences and needs in the rural areas of the country demand more study and attention from policymakers and researchers.

Virtually every writer on the educational status in rural America tends to agree that vocational training and economic development themes are very strong in rural education. Authors like Hobbs (1979) and Rosenfeld (1983b) promote the idea that rural schools not only should pay more attention to the individual skills that youth and adults need for occupational success, but also should themselves become sites for economic development interests. In addition to serving regional or state needs and hoping to attract new businesses, school officials should use the school curriculum to promote local small business development and entrepreneurial training. A number of implications can be drawn from the literature on rural vocational education.

The greatest single need for all rural areas is a sound basic education program. Without a quality basic education program, students will be hampered in all of their future endeavors, whether they migrate out of the community or remain in the area. According to Rosenfeld (1981) the basic skill level of rural students is less than the skill level of urban students. The declining economic base of many rural communities continues to jeopardize the ability of the schools to provide sound basic education programs. Students from rural schools have higher dropout rates and lower academic achievement levels than their urban counterparts. As a potential solution to this problem, vocational education must engage in collaborative activities to strengthen basic education through the various vocational education programs offered to youth and adults. Vocational education must be positioned to assist in correcting both of these community problems.

Economic development is critical for the economic and social stability of rural areas. Economic development creates new jobs by bringing new industry into an area. More jobs help to curb the out-migration for employment. Vocational education serves a vital role in preparing a local labor force with the related skills for specific jobs provided by new industries.

Vocational education also can increase the entrepreneurial skills of community residents, enabling them to start their own businesses in the community, thus creating new employment and public services. The self-employed and entrepreneurs need to have skills in business management, record keeping, salesmanship, and so forth, skills that are slowly being integrated into vocational education programs.

Rosenfeld (1983b) indicates that strong flexible vocational programs can be used to draw industry into an area by being in a position to supply a continuous group of workers trained specifically for new jobs with the training costs being assumed by the state. Texas claims that through state supported vocational education it can save a new industry up to $2,000 for every new employee and Kentucky advertises that it has a vocational education center within 25 miles of every plant. Vocational education and JTPA can work together to help businesses get started and ensure that a skilled labor force exists in every rural area.

The role of vocational education in economic development in rural areas requires that the vocational curriculum be flexible and responsive to the needs of business and industry. Up-to-date training is the key to meeting these needs. The traditional vocational agriculture curriculum may be used as a foundation program but may need to be updated to meet modern occupational needs. The retooling of a traditional program such as vocational agriculture in order to retain the management, leadership, and problem-solving skills would be a major step in preserving the rural values of the area while preparing future employees for new industries. The urban model of 1 certified teacher and 20 students studying the same subject may not be appropriate for most rural areas. Rural vocational programs must be able to develop curricula that are responsive to the needs of the types of industries in their immediate areas. Because many rural Americans are self-employed, vocational programs should include entrepreneurial courses in their curricula.

Rural secondary schools must provide more than one wage-earning vocational program (i.e., vocational agriculture). Statistics reveal that 50-65 percent of high school graduates will graduate from neither a 4-year college nor a postsecondary vocational program (National Association of State Councils on Vocational Education 1987). Diversified vocational opportunities are needed by these students who will end their formal education with graduation from high school.

Rosenfeld (1981) suggests that due to the decline in the number of jobs on farms, training for occupations related to agribusiness industries should be made available. For example, he states that programs should be developed for occupations related to feed products, farm equipment, food processing, paper products, and marketing.

Future vocational education delivery systems will require rural school districts to work cooperatively with other districts and organizations to provide expanded vocational program offerings for rural students. Such cooperative arrangements will provide rural citizens access to a larger variety of training programs based on local and regional employment needs. Other results of such efforts are elimination of unnecessary duplication of programs and greater economic efficiency. Through the pooling of resources, a higher level of special services, such as career guidance and counseling, will need to be provided.

There is a strong need for increased emphasis on postsecondary and adult vocational education programs in rural America. Since the passage of the Vocational Education Act of 1963, many rural postsecondary and adult students have been served by area vocational-technical schools and community colleges. There will be an increased need to serve diverse groups of people, ranging from those seeking skills for initial employment to underemployed and displaced workers seeking a career change. With only 15-25 percent of high school graduates enrolling in postsecondary and adult vocational education programs (National Association of State Councils on Vocational Education 1987), there is a growing need for increased access to vocational instruction.

Rural school administrators need to investigate the cost-effectiveness of implementing alternative strategies for delivering vocational instruction in sparsely populated areas to limited numbers of students. Telecommunications and educational technology provide easy access to a variety of

educational programs which have traditionally not been offered in remote areas. If the available technology is to be utilized, teachers must be given training and time to make appropriate use of them.

## RECOMMENDATIONS

Based on the conclusions and implications derived from the literature, the following recommendations for future rural vocational education action are made:

- National policymakers should provide for set-aside funds for rural vocational and adult education to ensure that all students, regardless of the physical location and size of school, have access to comparable vocational education programs.

- The U.S. Department of Education should sponsor research to determine rural vocational education needs and provide technical assistance for vocational program development in rural areas.

- The Congress should establish an office of rural education and development to provide information exchange between appropriate governmental and private sector agencies for rural development.

- State and local policymakers must recognize the value of vocational education as a strong contributor to the economic development and stability of rural communities, especially for newly trained workers.

- State funding policies should be modified to recognize the added cost of delivering vocational programs in rural areas.

- Rural school districts must organize to provide cooperatively increased vocational program offerings to students in rural areas to meet the needs of business and industry and to create more viable career offerings in small business.

- State policymakers should provide funds to encourage the development and use of innovative instructional delivery systems for rural areas.

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